Tev Studies Supplemental

"What experiments require dedicated studies periods vs several hour end of store studies?"

- My opinions – some may be *better* as dedicated studies, but not *required*
- Some plans contain both proton-only and end-of-store portions

- Crystal collimator studies for antiprotons (reconfiguration in tunnel)
- ½ integer working point
- Some beam-beam related studies (requiring special beam conditions)
- Some collimator studies (transverse impedance, beam profile by scraping)
- Space-Charge Compensation with electron column
- IBS benchmarking
- Instability studies
- Electron cloud
- Instrumentation tests (modification/installation, special beam conditions)

Tev Studies Supplemental

"Describe what is known about investments/accelerator modifications are required to enable the various experiments"

- Overall, little work in tunnel needed for most experiments
- Swapping electron lens guns is straightforward – 1 day (incl. recovery)
  - During short maintenance opportunities
- Installing new crystal collimators is more involved
  - Removal from tunnel, installation in goniometers, reinstallation in tunnel
  - Tunnel removal & reinstallation is straightforward – similar to e-gun swaps
- Electron cloud
  - Some instrumentation already installed in warm straight
  - Readily removed/swapped (like TEL e-guns)
- Crystal collimation with pbars requires reconfiguration in tunnel
  - ~1 week for moving components, instrumentation
- Modification/installation of other devices not well developed
  - Higher harmonic cavity for flat bunches (+ power, cooling, controls...)
  - Looking for ODR with sync-light monitor, OTR?